

## **Operator Data by Size Class**

## Operator Data by Size Class

### Natural Gas

To remain competitive in the domestic oil and gas industry, companies have to reduce costs and look for areas of profitable growth. Over the past few years, we have seen companies restructure to focus on their core areas of profit. This restructuring has taken many forms, for example, mega-mergers, laying off employees, early retirements and buyouts, flattening management structure, selective sales of marginally profitable properties, and acquisitions. Documenting some of these changes is important.

Appendix A is a series of tables of the proved reserves and production by production size class for the years 1993 through 1998 for oil and gas well operators. The tables show the volumetric change and percent change from the previous year and from 1993. In addition they show the 1998 average per operator in each class. All companies that reported to EIA were ranked by production size for each of the 6 years. We computed company production size classes as the sum of the barrel oil equivalent of the crude oil production, lease condensate production, and wet gas production for each operator. The companies were then placed in the following production size classes: 1–10, 11–20, 21–100, 101–500, and all “other” oil and gas operators. The “other” category contains 23,120 small operators. We estimate production and reserves for small operators each year from a sample of approximately 8 percent or less of these operators.

Class 1–10 contains the 10 highest producing companies each year on a barrel oil equivalent basis. These companies are not necessarily the same 10 companies each year.

We also include statistics for operator Category sizes at the bottom portion of tables in this appendix. These are the categories used by EIA in processing and assessing reserves surveys and are presented here as additional perspective. For further explanation of categories sizes see definitions and descriptions in Appendix E.

### Proved Reserves

The wet natural gas proved reserves reported for 1993 through 1998 have changed from 170.5 trillion cubic feet to 172.4 trillion cubic feet (Table A1). These proved reserves are highly concentrated in the larger companies. In 1998, the top 20 operators (Class 1–10 and Class 11–20) producing companies had 54 percent of the proved reserves of natural gas. The next two size classes contain 80 and 400 companies and account for 27 and 14 percent of the U.S. natural gas proved reserves, respectively. The top 20 operators had a decline of 7 percent in their natural gas proved reserves from 1993 to 1998. While the rest of the operators in (Class 21–100, Class 101–500, and Class Other) had an increase of 13 percent in their reserves. In 1998, the top 20 operators’ natural gas reserves increased by 4 percent from 1997.

### Production

Wet natural gas production has decreased from 20.1 trillion cubic feet to 19.6 trillion cubic feet in 1998 (Table A2). In 1998, the top 20 producing companies had 52 percent of the production of wet natural gas, while having 54 percent of the proved reserves. The next two size classes have 29 and 14 percent of the wet natural gas production, respectively. The top 20 operators had an increase of 6 percent in their wet natural gas production from 1993 to 1998. The rest of the operators had an increase of 4 percent from 1993 to 1998. The top 20 operators’ wet natural gas production had a decrease of 2 percent in 1998, while the rest of the operators had a decrease of 3 percent.

## Crude Oil

### Proved Reserves

Proved reserves of crude oil are more highly concentrated in a few companies than those of natural gas. The 20 largest oil and gas producing companies in 1998 had 68 percent of U.S. proved reserves of crude oil (Table A3), in contrast to wet natural gas where these same companies operated only 54 percent of the total proved reserves. These companies have tended in the past few years to concentrate their domestic operations in fewer fields and focus more of their resources on their foreign operations.

U.S. proved reserves of crude oil decreased 7 percent in 1998. The top 20 producing companies remained essentially the same in their domestic proved reserves of crude oil during 1998. The top 20 class had a decline of 17 percent in their crude oil proved reserves from 1993 to 1998. The class “other” had a 34 percent decrease from 1993 to 1998. During the 1993–1998 period, many operators were continuing to actively buy, sell, and restructure their oil property positions.

## Production

Crude oil production reported for 1993 through 1998 has decreased from 2.3 billion barrels to 2.0 billion barrels (Table A4). The 20 largest oil and gas producing companies had 64 percent of U.S. production of crude oil in 1998, while in 1993 they accounted for 68 percent of production. This is in contrast to wet natural gas where these same companies produced only 52 percent of the total. U.S. production of crude oil declined by 15 percent from 1993 to 1998. The top 20 operators had a decline of 19 percent in their oil production during the same period. U.S. production of crude oil declined by 7 percent from 1997 to 1998, while the top 20 operators production decreased by 2 percent. The next two size classes account for 17 and 10 percent of the U.S. crude oil production, respectively.

### Fields

The number of fields in which Category I and Category II operators were active dropped significantly during the 1993–1998 period (Table A5). From 1993 through 1998, the number of fields in which the top 20 operators were active in dropped by 2,292 (35 percent), while in 1998 the number dropped 526 (11 percent) from 1997.

**Table A1. Natural Gas Proved Reserves, Wet After Lease Separation, by Operator Production Size Class, 1993–1998**  
(Billion Cubic Feet at 14.73 psia and 60° Fahrenheit)

Size Class	1993	1994	1995	1996	1997	1998	1997–1998 Volume and Percent Change	1993–1998 Volume and Percent Change	1998 Average Reserves per Operator
Class 1–10	77,552	76,665	75,856	72,606	68,876	64,336	-4,540	-13,216	6,433.577
Percent of Total	45.5%	44.6%	43.7%	41.5%	39.2%	37.3%	-6.6%	-17.0%	
Class 11–20	22,467	22,691	24,648	25,416	27,705	28,338	633	5,871	2,833.802
Percent of Total	13.2%	13.2%	14.2%	14.5%	15.8%	16.4%	2.3%	26.1%	
Class 21–100	39,135	40,566	42,604	43,300	45,593	47,009	1,416	7,874	587.617
Percent of Total	23.0%	23.6%	24.6%	24.7%	25.9%	27.3%	3.1%	20.1%	
Class 101–500	19,870	20,608	20,150	22,483	23,338	24,471	1,133	4,601	61.176
Percent of Total	11.7%	12.0%	11.6%	12.8%	13.3%	14.2%	4.9%	23.2%	
Class Other (23,120)	11,466	11,409	10,218	11,342	10,209	8,289	-1,920	-3,177	0.360
Percent of Total	6.7%	6.6%	5.9%	6.5%	5.8%	4.8%	-18.8%	-27.7%	
Category I (170)	142,892	143,703	148,233	146,601	147,491	146,458	-1,033	3,566	861.520
Percent of Total	83.8%	83.6%	85.4%	83.7%	83.9%	84.9%	-0.7%	2.5%	
Category II (418)	17,305	18,158	15,828	18,382	17,764	18,033	269	728	43.140
Percent of Total	10.2%	10.6%	9.1%	10.5%	10.1%	10.5%	1.5%	4.2%	
Category III (23,032)	10,292	10,078	9,416	10,164	10,466	7,952	-2,515	-2,340	0.345
Percent of Total	6.0%	5.9%	5.4%	5.8%	6.0%	4.6%	-24.0%	-22.7%	
<b>Total Published</b>	<b>170,490</b>	<b>171,939</b>	<b>173,476</b>	<b>175,147</b>	<b>175,721</b>	<b>172,443</b>	<b>-3,278</b>	<b>1,953</b>	<b>7.301</b>
<b>Percent of Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.00%</b>	<b>-1.9%</b>	<b>1.1%</b>	

Note: There were 23,032 active Category III operators in the 1998 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 2,136 Category III operators (Table E2). The “other” size class represents 23,120 operators in the 1998 frame (23,620 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

**Table A2. Natural Gas Production, Wet After Lease Separation, by Operator Production Size Class, 1993–1998**  
(Billion Cubic Feet at 14.73 psia and 60° Fahrenheit)

Size Class	1993	1994	1995	1996	1997	1998	1997–1998 Volume and Percent Change	1993–1998 Volume and Percent Change	1998 Average Production per Operator
Class 1–10	6,801	7,216	7,174	7,448	7,178	6,954	-224	153	695.409
Percent of Total	36.5%	37.6%	38.0%	37.5%	35.7%	35.4%	-3.1%	2.2%	
Class 11–20	2,861	3,083	3,101	3,002	3,286	3,317	31	456	331.668
Percent of Total	15.3%	16.0%	16.4%	15.1%	16.3%	16.9%	0.9%	15.9%	
Class 21–100	4,894	4,878	4,871	5,316	5,729	5,595	-134	701	69.941
Percent of Total	26.3%	25.4%	25.8%	26.7%	28.4%	28.5%	-2.3%	14.3%	
Class 101–500	2,597	2,552	2,477	2,623	2,665	2,721	56	124	6.802
Percent of Total	13.9%	13.3%	13.1%	13.2%	13.2%	13.9%	2.1%	4.8%	
Class Other (23,120)	1,488	1,481	1,251	1,484	1,276	1,035	-241	-453	0.045
Percent of Total	8.0%	7.7%	6.6%	7.5%	6.3%	5.3%	-18.9%	-30.4%	
Category I (170)	15,122	15,656	15,800	16,381	16,897	16,619	-278	1,497	97.761
Percent of Total	81.1%	81.5%	83.7%	82.4%	83.9%	84.7%	-1.6%	9.9%	
Category II (418)	2,159	2,221	1,923	2,128	1,979	2,019	40	-140	4.830
Percent of Total	11.6%	11.6%	10.2%	10.7%	9.8%	10.3%	2.0%	-6.5%	
Category III (23,032)	1,360	1,333	1,151	1,364	1,258	984	-274	-376	0.043
Percent of Total	7.3%	6.9%	6.1%	6.9%	6.2%	5.0%	-21.8%	-27.6%	
<b>Total Published</b>	<b>18,641</b>	<b>19,210</b>	<b>18,874</b>	<b>19,873</b>	<b>20,134</b>	<b>19,622</b>	<b>-512</b>	<b>981</b>	<b>0.831</b>
<b>Percent of Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-2.5%</b>	<b>5.3%</b>	

Note: There were 23,032 active Category III operators in the 1998 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 2,136 Category III operators (Table E2). The “other” size class represents 23,120 operators in the 1998 frame (23,620 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

**Table A3. Crude Oil Proved Reserves by Operator Production Size Class, 1993–1998**  
(Million Barrels of 42 U.S. Gallons)

Size Class	1993	1994	1995	1996	1997	1998	1997–1998 Volume and Percent Change	1993–1998 Volume and Percent Change	1998 Average Reserves per Operator
Class 1–10	14,894	14,351	13,891	13,362	11,434	11,501	67	-3,393	1,150.102
Percent of Total	64.9%	63.9%	62.1%	60.7%	50.7%	54.7%	0.6%	-22.8%	
Class 11–20	2,389	2,276	2,422	2,013	2,977	2,894	-83	505	289.401
Percent of Total	10.4%	10.1%	10.8%	9.1%	13.2%	13.8%	-2.8%	21.1%	
Class 21–100	2,401	2,607	2,623	3,155	4,384	3,677	-707	1,276	45.963
Percent of Total	10.5%	11.6%	11.7%	14.3%	19.4%	17.50%	-16.1%	53.1%	
Class 101–500	1,440	1,512	1,793	1,838	2,111	1,754	-357	314	4.385
Percent of Total	6.3%	6.7%	8.0%	8.3%	9.4%	8.3%	-16.9%	21.8%	
Class Other (23,120)	1,833	1,711	1,622	1,649	1,640	1,208	-432	-625	0.052
Percent of Total	8.0%	7.6%	7.3%	7.5%	7.3%	5.7%	-26.3%	-34.1%	
Category I (170)	20,090	19,648	19,647	19,312	19,461	18,819	-642	-1,271	110.702
Percent of Total	87.5%	87.5%	87.9%	87.7%	86.3	89.5%	-3.3%	-6.3%	
Category II (418)	1,131	1,142	1,103	1,117	1,400	1,018	-381	-113	2.435
Percent of Total	4.9%	5.1%	4.9%	5.1%	6.2	4.8%	-27.2%	-10.0%	
Category III (23,032)	1,737	1,668	1,600	1,588	1,685	1,197	-489	-540	0.052
Percent of Total	7.6%	7.4%	7.2%	7.2%	7.5	5.7%	-29.0%	-31.1%	
<b>Total Published</b>	<b>22,957</b>	<b>22,457</b>	<b>22,351</b>	<b>22,017</b>	<b>22,546</b>	<b>21,034</b>	<b>-1,512</b>	<b>-1,923</b>	<b>0.891</b>
<b>Percent of Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-6.7%</b>	<b>-8.4%</b>	

Note: There were 23,032 active Category III operators in the 1998 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 2,136 Category III operators (Table E2). The “other” size class represents 23,120 operators in the 1998 frame (23,620 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

**Table A4. Crude Oil Production by Operator Production Size Class, 1993–1998**  
(Million Barrels of 42 U.S. Gallons)

Size Class	1993	1994	1995	1996	1997	1998	1997–1998 Volume and Percent Change	1993–1998 Volume and Percent Change	1998 Average Production per Operator
Class 1–10	1,346	1,310	1,270	1,220	1,047	1,025	-22	-321	102.506
Percent of Total	57.5%	57.8%	57.4%	56.1%	49.0%	51.5%	-2.1%	-23.8%	
Class 11–20	236	224	221	185	262	255	-7	19	25.549
Percent of Total	10.1%	9.9%	10.0%	8.5%	12.3%	12.8%	-2.7%	8.1%	
Class 21–100	276	287	276	307	373	342	-31	66	4.280
Percent of Total	11.8%	12.7%	12.5%	14.1%	17.4%	17.2%	-8.3%	23.9%	
Class 101–500	202	200	214	213	237	206	-31	4	0.514
Percent of Total	8.6%	8.8%	9.7%	9.8%	11.1%	10.3%	-13.1%	2.0%	
Class Other (23,120)	279	247	232	248	219	163	-56	-116	0.007
Percent of Total	11.9%	10.9%	10.5%	11.4%	10.2%	8.2%	-25.6%	-41.6%	
Category I (170)	1,922	1,879	1,844	1,791	1,760	1,714	-46	-208	10.080
Percent of Total	82.2%	82.8%	83.3%	82.4%	82.3%	86.1%	-2.6%	-10.8%	
Category II (418)	153	150	139	143	157	118	-39	-35	0.283
Percent of Total	6.5%	6.6%	6.3%	6.6%	7.3%	5.9%	-24.8%	-22.9%	
Category III (23,032)	264	239	230	239	221	159	-62	-105	0.007
Percent of Total	11.3%	10.5%	10.4%	11.0%	10.3%	8.0%	-28.1%	-39.8%	
<b>Total Published</b>	<b>2,339</b>	<b>2,268</b>	<b>2,213</b>	<b>2,173</b>	<b>2,138</b>	<b>1,991</b>	<b>-147</b>	<b>-348</b>	<b>0.084</b>
<b>Percent of Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-6.9%</b>	<b>-14.9%</b>	

Note: There were 23,032 active Category III operators in the 1998 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 2,136 Category III operators (Table E2). The “other” size class represents 23,120 operators in the 1998 frame (23,620 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

**Table A5. Operator Field Count by Operator Production Size Class, 1993–1998**

Size Class	1993	1994	1995	1996	1997	1998	1997–1998 Number and Percent Change	1993–1998 Number and Percent Change	1998 Average Number of Fields per Operator
Class 1–10	3,591	3,258	3,113	2,800	2,566	2,475	-91	-1,116	247.500
Percent of Total	13.2%	12.2%	11.9%	10.7%	10.4%	9.5%	-3.5%	-31.1%	
Class 11–20	2,998	2,795	2,772	2,441	2,257	1,822	-435	-1,176	182.200
Percent of Total	11.1%	10.5%	10.6%	9.3%	9.1%	7.0%	-19.3%	-39.2%	
Class 21–100	7,600	7,752	7,569	7,526	7,159	7,526	-43	-630	94.075
Percent of Total	28.0%	29.1%	28.9%	28.7%	28.9%	29.0%	-0.6%	-7.7%	
Class 101–500	11,881	11,878	11,886	12,492	12,878	12,817	-61	936	32.043
Percent of Total	43.8%	44.6%	45.4%	47.7%	52.0%	49.4%	-0.5%	7.9%	
Rest	1,715	1,897	1,601	<sup>a</sup> 952	1,332	1,524	603	365	14.796
Percent of Total	6.3%	7.1%	6.1%	<sup>a</sup> 3.6%	5.4%	5.9%	65.5%	31.5%	
Category I	16,603	16,161	16,256	15,635	15,232	15,666	434	-937	92.153
Percent of Total	61.2%	60.7%	62.1%	59.7%	58.2%	60.4%	2.8%	-5.6%	
Category II	10,516	10,452	9,939	10,576	R9,530	10,271	741	-245	24.572
Percent of Total	38.8%	39.3%	37.9%	40.3%	41.8%	39.6%	7.8%	-2.3%	
<b>Total Reported</b>	<b>27,119</b>	<b>26,613</b>	<b>26,195</b>	<b>26,211</b>	<b>R24,762</b>	<b>25,937</b>	<b>1,175</b>	<b>-1,182</b>	<b>40.717</b>
<b>Percent Change</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.00%</b>	<b>4.7%</b>	<b>-4.4%</b>	

<sup>a</sup>The reduced 1996 survey had fewer operators and fields in the “rest” class.

R = Revised

Note: Includes only data from Category I and Category II operators. In 1998, there were 170 Category I operators and 418 Category II operators. The “rest” size class had 88 operators in 1998.

Source: Energy Information Administration, Office of Oil and Gas.